

- 1 1. A method, comprising:
 - 2 receiving a request associated with a plurality of entities;
 - 3 identifying a sequence of transactions associated with the request;
 - 4 executing at least some of the transaction sequence to form an instance of a semantic
 - 5 network, the semantic network instance including at least one relationship between the plurality
 - 6 of entities; and
 - 7 processing the request based, at least in part, on the semantic network.
- 1 2. The method of claim 1, wherein the plurality of entities correspond to at least two
- 2 different entity types interacting in an industry.
- 1 3. The method of claim 2, wherein the industry is a service-based industry and the at least
- 2 two different entity types correspond to at least two of a service provider, a service implementer,
- 3 a service purchaser, a service beneficiary, a service maintainer, and a service regulator.
- 1 4. The method of claim 2, wherein the industry relates to a health care industry and the at
- 2 least two different entity types correspond to at least two of a health care subscriber, a health care
- 3 provider, a health care practitioner, a health care beneficiary, and a health care company.
- 1 5. The method of claim 2, wherein the industry is a product-based industry and the at least
- 2 two different entity types correspond to at least two of a product manufacturer, a product
- 3 distributor, a product reseller, a product marketer, a product seller, a product purchaser, a product
- 4 maintainer, and a product regulator.

- 1 6. The method of claim 1, further comprising:
 - 2 storing indicia associated with the request in a data structure; and
 - 3 assigning a version number to the data structure.
- 1 7. The method of claim 6, further comprising:
 - 2 based, at least in part, on the version number of the data structure, re-executing at least
 - 3 some of the transaction sequence to reprocess the request.
- 1 8. The method of claim 1, wherein the request is received from an electronic data
2 interchange system.
- 1 9. The method of claim 1, wherein the request is received from at least one of an application
2 program interface, a user interface, and a software editing tool.
- 1 10. The method of claim 1, further comprising:
 - 2 representing the request in a natural language format exhibiting a fixed context and a
 - 3 fixed grammar.
- 1 11. The method of claim 10, wherein the fixed grammar exhibits a Backus-Naur format.
- 1 12. The method of claim 10, wherein the fixed context is based, at least in part, on an
2 industry-specific data structure, the industry-specific data structure being used to identify
3 operations associated with the transaction sequence.
- 1 13. The method of claim 10, further comprising:
 - 2 parsing the natural language representation of the request into a plurality of fields; and
 - 3 mapping at least some of the fields into at least one data structure.

1 14. The method of claim 13, further comprising:

2 assigning a version number to the at least one data structure.

1 15. The method of claim 1, wherein the at least one relationship corresponds to at least one
2 contractual provision associated with the plurality of entities.

1 16. The method of claim 1, wherein the request corresponds to at least one of a request for
2 payment of services performed, a request to authorize proposed services, a request to enroll a
3 service provider, a request to enroll a service purchaser, a request to enroll a service beneficiary,
4 and an adoption of a new contract.

1 17. The method of claim 1, further comprising:

2 forming an electronic message in response to detecting an error during the execution of
3 the transaction sequence.

1 18. The method of claim 1, wherein indicia associated with the plurality of entities
2 correspond to a plurality of nodes in the semantic network and the at least one relationship
3 corresponds to at least one link interconnecting at least some of the plurality of nodes in the
4 semantic network.

1 19. The method of claim 1, further comprising:

2 querying data structures associated with the semantic network; and
3 in response to the query, forming an electronic document containing indicia associated
4 with the plurality of entities and the at least one relationship, wherein the electronic document is
5 viewable in a natural language format exhibiting a fixed context and a fixed grammar.